

moving means on the basis of the detection signal, and controlling the light beam so that the focus condition of the light beam becomes a prescribed focus condition;

a focus jumping means for jumping the focal point of the light beam to a target information face which is one of the first information face and the second information face by driving said moving means; and

a storage means for storing signals obtained when the focal point of the light beam is passed through the first and second information faces by driving said moving means so that the light beam goes away from or close to the recording medium;

wherein, when a focus jumping is performed by said focus jumping means, a gain of said focus control means is changed according to the values stored in said storage means.

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2/35. An apparatus as claimed in claim 34, wherein said storage means stores signals corresponding to an amount of reflected light which is detected by said light detecting means when the focal point of the light beam is passed through the first and second information faces by driving said moving means so that the light beam goes away from or close to the recording medium.

3/36. An apparatus as claimed in claim 35, wherein, when the focus jumping is performed by said focus jumping means, a focus control lead-in level is set according to the values stored in said storage means.

4/37. An apparatus as claimed in claim 36, wherein a focus control lead-in level for the focus jumping is set according to the value stored in said storage means, a gain of which is changed according to the values stored in said storage means.

5/38. An apparatus as claimed in claim 37, wherein said storage means stores focus condition detecting signals obtained when the focal point of the light beam is passed through the first and second information faces by driving said moving means so that the light beam goes away from or close to the recording medium, wherein said focus condition detecting signal comprises at

least one of a gain, an offset, and a level, and wherein, when the focus jumping is performed by said focus jumping means, at least one of a gain, an offset, and a level of said focus control means is changed according to the values stored in said storage means.

6/39. An apparatus as claimed in claim 38, wherein, when the focus jumping is performed by said focus jumping means, a focus control lead-in level is set according to the values stored in said storage means.

7/40. An apparatus as claimed in claim 38, wherein a focus control lead-in level for the focus jumping is set according to the value stored in said storage means, a gain of which is changed according to the values stored in said storage means.

8/41. An optical disk apparatus for reproducing information recorded on a recording medium having two information faces, by irradiating the recording medium with a focused light beam, said apparatus comprising:

a moving means for moving a focal point of the light beam irradiating the recording medium so that the focal point crosses a track on the recording medium;

a tracking control means for detecting a positional error between the focal point of the light beam and the track on the recording medium, driving said moving means according to the track error signal, and controlling the light beam so that the focal point is positioned on the track;

a focus jumping means for jumping the focal point of the light beam to a target information face, which is one of the first information face and the second information face, and seeking the target information face;

a storage means for storing tracking condition signals for the first information face and the second information face;

an arithmetic means for performing an arithmetic operation on the tracking condition signals stored in said storage means with an output signal from said tracking control means; and

a system control means for controlling the system so that a tracking condition signal which is read out of said storage means and corresponds to the target information face is used to adjust

the output signal from the tracking control means, when the jumping and seeking are performed by said focus jumping means.

61 9/42. An apparatus as claimed in claim 41, wherein the tracking condition signals stored in said storage means are decentration signals which corresponding to decentrations of tracks on the first information face and the second information face, said arithmetic means is an adding means for adding the decentration signals stored in said storage means to the output signal from said tracking control means, and said system control means controls the system so that a decentration signal which is read out of said storage means and corresponds to the target information face is added to the output signal from said tracking control means, when the jumping and seeking are performed by said focus jumping means.

81 10/43. An apparatus as claimed in claim 41, wherein the tracking condition signals stored in said storage means are desired loop gains of said tracking control means for the first information face and the second information face, said arithmetic means is a multiplication means for multiplying the track gain signals stored in said storage means by an output signal from said tracking control means, and said system control means controls the system so that a tracking gain signal which is read out of said storage means and corresponds to the target information face is multiplied by the output signal from the tracking control means, when the jumping and seeking are performed by said focus jumping means.

111/ 44. An optical disk apparatus as claimed in claim 34, wherein said signals stored in said storage means are desired loop gains of said focus control means for the first information face and the second information face, and said optical disk apparatus further comprising;

a multiplication means for multiplying the focus gain signals stored in said storage means by an output signal from said focus control means; and

a system control means for controlling the system so that a focus gain signal which is read out of said storage means and corresponds to the target information face is multiplied by the output signal from said focus control means.

12/ 45. An optical disk apparatus as claimed in claim 34, wherein said signals stored in said storage means are servo offsets corresponding to desired target positions of said focus control means on the first information face and the second information face, and said optical disk apparatus further comprises:

a system control means for controlling the system so that the target position of said focus control means is changed to a focus position signal that is read out of said storage means and corresponds to the target information face.

61 13/ 46. An optical disk apparatus as claimed in claim 81, wherein said signals stored in said storage means are servo offsets corresponding to desired target positions of said tracking control means on the first information face and the second information face, and said optical disk apparatus further comprises:

a system control means for controlling the system so that the target position of said tracking control means is changed to a tracking position signal that is read out of said storage means and corresponds to the target information face.

14/ 47. An optical disk apparatus as claimed in claim 81, further comprising:  
a light detecting means for detecting a reflected light from the recording medium at a plurality of light responsive parts;

a phase difference track error detecting means for generating a phase difference track error signal corresponding to the positional relationship between the focal point of the light beam and the track on each information face, on the basis of the phase relationship of signals output from the respective light responsive parts of said light detecting mean; and

wherein said tracking control means drives said moving means according to an output signal from said phase difference track error detecting means, and controls the light beam on the information face so that the focal point of the light beam seeks the track correctly;

wherein said storage means stores delays or leads of signals output from the respective light responsive parts of said light detecting means, the delays or leads providing desired values